

ABSTRACT

A Si etching method etches a Si wafer held on a susceptor placed in a processing vessel by a plasma-assisted etching process. A mixed etching gas prepared by mixing fluorosulfur gas, such as SF₆ gas, or 5 fluorocarbon gas, O₂ gas and fluorosilicon gas, such as SiF₄ gas is supplied into the processing vessel. RF power of 40 MHz or above is applied to the mixed etching gas to generate a plasma. The Si wafer is etched with radicals and ions contained in the plasma.